Resilience and Early Interventions: A Military Occupational-Health Perspective

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Warrior Care 21
Conference
Tampa, FL
October 2016

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Outline

- Occupational Context
- Barriers to Treatment Seeking
- Resilience Building
  - Matching Readiness for Change
  - Role of Leaders
Occupational Health Model

Background
- Personal
- Traditional Occupational
- High-Risk/ Traumatic

Demands

Personal Resources
- Coping Strategies
- Social Support (Family, Friends)

Outcomes
- Symptoms/ Reactions
- Attitudes
- Performance

Treatment

Goals
- Health
- Work
- Relationships
- Enjoying Life

Occupational Resources
- Professional Identity
- Buddies/Unit
- Leadership
- Training
- Early Interventions
- Performance Enhancement
- Strategies

Barriers to Treatment Seeking

- Stigma & barriers to care (Hoge et al. 2004; Gould et al., 2010)
- What drives mental health care utilization?
  - National Comorbidity Survey: 73% “Wanted to handle problem on own” (Mojtabai et al., 2010)
  - Canadian Defence Force found preference for self-help information
  - Negative beliefs about treatment predicted less health care utilization in veterans (Pietrzak et al., 2009)
  - Attitudes correlated with soldier health care utilization (Kim et al., 2011)
Mental Health Care Utilization

- Stigma (Professional Concerns)
- Practical Barriers to Care
- Positive Attitudes
- Self-Management

Factors:
- Age
- Rank
- Gender
- PTSD

Source: Adler, Britt, Riviere, Kim, & Thomas (2014) BJP
Typical Training Programs

• Universal
• One-size-fits-all
• Teach “resilience” skills
• Some evidence of efficacy
  ➢ Performance skills at Basic Training (Adler et al., 2015, Cohn & Pakenham, 2008)
  ➢ Pre-deployment (Jha et al., 2008; Jha et al., 2015)
  ➢ Post-deployment (Adler et al., 2009; Castro et al., 2012; Mulligan et al., 2010)
  ➢ Unit-based (Cacioppo et al., 2015)
• Small effect sizes (.20-.30)
Resilience Training: Enhancing Effectiveness

- Individuals
- Leaders
## Stages of Change

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
<th>Instructional Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-contemplation</td>
<td>No intention for change</td>
<td>Engage with information about need for change, provide personalized information about risks if no change, emphasize multiple benefits of change</td>
</tr>
<tr>
<td>Contemplation</td>
<td>Starting to look at pros and cons</td>
<td>Emphasize what life would be like if changed, learn from people who have changed, encourage them to work at reducing the cons</td>
</tr>
<tr>
<td>Preparation</td>
<td>Intends to act/committed to change</td>
<td>Encourage seeking support, telling people about plan and thinking about how change would feel, help create and implement specific action plan, set realistic goals</td>
</tr>
<tr>
<td>Action</td>
<td>Actively working to change</td>
<td>Provide action-oriented planning to strengthen commitment and fight urge to slip back</td>
</tr>
<tr>
<td>Maintenance</td>
<td>Has changed, prevent relapse</td>
<td>Provide support, positively address slips/relapses, employ reminder systems</td>
</tr>
</tbody>
</table>

Source: Mander et al. (2012); Prochaska & DiClemente (1983)
Measure

Pre-contemplation
- I don’t need resilience training (RC).
- Resilience training is a waste of time (RC).
- It is not worth my time talking about resilience training because everyone has problems (RC).

Contemplation / Preparation
- I hope resilience training will help me understand myself better.
- I wish I had more ideas about how to improve my resilience.
- Resilience training might be useful to me.
- I am interested in resilience training so I can maintain my resilience.

Action
- I have been practicing resilience skills.
- At times, I struggle with my resilience but I’m working on it.
- I am working hard to improve my resilience.

Maintenance
- I am interested in increasing my resilience.
- I would like to prevent a decline in my resilience.
• Alpha = .94

37.6% clustered tightly around the median (scale midpoint)

30.6% below the median

31.8% above the median

Source: Sowden & Adler (2016)
Readiness Stage: Utility

Composite measure: “How much are you using the skills you’ve learned in resilience training?”

Source: Sowden & Adler (2016)

\[ F(2, 1169) = 174, p < .001, d = 1.1 \]
Readiness Stage: Health

Source: Sowden & Adler (2016)
Readiness Stage: Implications

- Potential to match readiness stage with training material
- Move away from a one-size-fits-all approach
- Future research
  - Identify mechanisms of change
  - Disentangle stages vs. overall readiness
  - Test group-level vs. individual-level construct
  - Develop quick assessment tools to target training
Resilience Training: Enhancing Effectiveness

- Individuals
- Leaders
Leadership

- Leadership correlated with better mental health
  - Civilian contexts (Kelloway & Barling, 2010)
  - Peacekeeping (Bliese & Halverson, 1998)
  - Combat (Jones et al., 2012)

- General leadership skills
  - Relevant in many situations (Bliese & Britt, 2001)
  - Span transactional & transformational behaviors (Bass, 1990)

- Limitations
  - Relatively “blunt instrument” for addressing specific challenges
  - Harder to teach (Barker, 1997; Gunia et al., 2015)
## WRAIR General Leadership

<table>
<thead>
<tr>
<th>WRAIR Items</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Exhibits clear thinking and reasonable action under stress</td>
<td></td>
</tr>
<tr>
<td>✓ Tells soldiers when they have done a good job</td>
<td></td>
</tr>
<tr>
<td>✗ Tries to look good to higher-ups by assigning extra missions or details to soldiers</td>
<td></td>
</tr>
<tr>
<td>✗ Embarrasses soldiers in front of others</td>
<td></td>
</tr>
</tbody>
</table>

Domain-Specific Leadership

• Previous Research
  - Safety-specific leadership\(^1\)
  - Health-specific leadership\(^2\)
  - Family-supportive leadership\(^3\)

Sources: \(^1\)Barling, Loughlin, & Kelloway (2002); \(^2\)Gurt, Schwennen, & Elke (2011); \(^3\)Hammer et al. (2011)
Behavioral Health Leadership Domains

- Combat Operational Stress Control (COSC) leadership
- Health-promoting leadership
- Resilience training leadership
COSC Leadership

- Combat Operational Stress Control (COSC) Leadership
  - COSC manual identifies a set of leader behaviors designed to reduce or ameliorate combat stress reactions of subordinates
## COSC Leadership

<table>
<thead>
<tr>
<th></th>
<th>Often/Always</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Platoon Sergeant</td>
</tr>
<tr>
<td>Does not judge soldiers who seek behavioral health help</td>
<td>53.4%</td>
</tr>
<tr>
<td>Encourages soldiers to seek help for stress-related problems</td>
<td>47.7%</td>
</tr>
<tr>
<td>Demonstrates concern for how families are dealing with stress</td>
<td>48.0%</td>
</tr>
<tr>
<td>Intervenes when a soldier displays stress reactions such as anxiety, depression or other behavioral health problem</td>
<td>45.2%</td>
</tr>
<tr>
<td>Encourages soldiers to express emotions following losses and setbacks during deployment</td>
<td>42.3%</td>
</tr>
<tr>
<td>Reminds soldiers after intense experiences that we are here to serve with honor, mission, greater purpose</td>
<td>49.4%</td>
</tr>
</tbody>
</table>
COSC Leadership & Mental Health

- 2,072 US Soldiers in Afghanistan (alpha = .91-.94)

Behavioral Health Leadership Domains

- Combat Operational Stress Control (COSC) leadership
- Health-promoting leadership
- Resilience training leadership
## Health-Promoting Leadership

<table>
<thead>
<tr>
<th>Thinking about your current team/unit, rate how often does your leadership</th>
<th>Often/Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emphasize maintaining professional standards</td>
<td>74%</td>
</tr>
<tr>
<td>Emphasize taking care of yourself physically</td>
<td>63%</td>
</tr>
<tr>
<td>Emphasize the importance of the medical mission</td>
<td>61%</td>
</tr>
<tr>
<td>Emphasize taking care of yourself mentally</td>
<td>52%</td>
</tr>
<tr>
<td>Give you positive feedback about your accomplishments</td>
<td>44%</td>
</tr>
<tr>
<td>Emphasize maintaining compassion</td>
<td>41%</td>
</tr>
<tr>
<td>Remind you to take a break/recharge</td>
<td>41%</td>
</tr>
<tr>
<td>Encourage you to get enough sleep</td>
<td>37%</td>
</tr>
<tr>
<td>Give you specific guidance on how to improve</td>
<td>35%</td>
</tr>
<tr>
<td>Reduce tension in the team/unit when emotions run high</td>
<td>34%</td>
</tr>
</tbody>
</table>

Source: Adler, Adrian, Hemphill, Scaro, Sipos, & Thomas (in press), Mil Med
Health-Promoting Leadership & Burnout

- 344 medical staff deployed to Afghanistan (alpha = .95)

Source: Adler, Adrian, Hemphill, Scaro, Sipos, & Thomas (in press)
Behavioral Health Leadership Domains

- Combat Operational Stress Control (COSC) leadership
- Health-promoting leadership
- Resilience training leadership
# Resilience Training Leadership

<table>
<thead>
<tr>
<th>Activity</th>
<th>Immediate Leaders Moderately/Quite a Bit/A lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attend resilience training activities</td>
<td>64%</td>
</tr>
<tr>
<td>Emphasize the importance of resilience training skills</td>
<td>62%</td>
</tr>
<tr>
<td>Refer to skills when talking with soldiers</td>
<td>56%</td>
</tr>
<tr>
<td>Encourage soldiers to use the skills</td>
<td>66%</td>
</tr>
</tbody>
</table>

Source: Sims & Adler (in press) Parameters
Resilience Training Leadership & Unit Climate

- 2,181 Soldiers deployed to Afghanistan

Source: Sims & Adler (in press) Parameters
Summary

- Methods to enhance resilience
  - Matching Soldiers to the right training
  - Behavioral Health Leadership

- Continued research on behavioral health leadership
  - Sleep leadership
  - Post-traumatic growth leadership
  - Emotion regulation leadership
Thank You!

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**Emotion Regulation Leadership**

- 3,030 Soldiers in Afghanistan and Germany (alpha = .86)

<table>
<thead>
<tr>
<th></th>
<th>Often/Always</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Platoon Sergeant</td>
</tr>
<tr>
<td>Can pause without immediately reacting in emotionally charged situations.</td>
<td>36.3%</td>
</tr>
<tr>
<td>Can calm down quickly if he/she gets upset.</td>
<td>48.0%</td>
</tr>
<tr>
<td>Is good at calming Soldiers down when they get angry.</td>
<td>41.7%</td>
</tr>
<tr>
<td>Is good at acknowledging when Soldiers are going through a tough time.</td>
<td>46.7%</td>
</tr>
</tbody>
</table>
Leadership vs. BH Leadership

- Are domain-specific leadership behaviors all the same?
  - Similar pattern for Platoon Leaders & Immediate Supervisors

<table>
<thead>
<tr>
<th></th>
<th>Sleep Leadership</th>
<th>COSC Leadership</th>
<th>Resilience Training Leadership</th>
<th>Emotion Regulation Leadership</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Leadership</td>
<td>.35</td>
<td>.55</td>
<td>.28</td>
<td>.61</td>
</tr>
<tr>
<td>Sleep Leadership</td>
<td>.52</td>
<td></td>
<td>.40</td>
<td>.44</td>
</tr>
<tr>
<td>COSC Leadership</td>
<td></td>
<td>.43</td>
<td></td>
<td>.72</td>
</tr>
<tr>
<td>Resilience Training</td>
<td></td>
<td></td>
<td></td>
<td>.35</td>
</tr>
<tr>
<td>Leadership</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
COSC Leadership & Combat

COSC Leadership Behaviors, Combat Exposure, and PTSD Symptoms

- Low COSC Leadership
- High COSC Leadership

Note: Analysis controlled for rank and general leadership.
Results (1 of 2)

- Performance Psychology resulted in better
  - Performance
    - Basic Rifle Marksmanship Grouping
    - Army Physical Fitness Test (APFT) diagnostic scores
  - Slide to Victory
  - Wall Hanger
  - Cognitive skills
- Key covariates
  - Sport history
  - Gender

Source: Adler et al. (2015), J of Applied Psych
Results (2 of 2)

- No significant difference
  - Victory Tower
  - Confidence Climb
  - Pre-NBC Chamber Anxiety
- Exploratory comparisons:
  - Combat Life Saver Test Scores
  - Behavioral Health Symptoms
  - Graduation Status

Source: Adler et al. (2015), J of Applied Psych
Implementation

Integrated into Master Resilience Training – Medical course

Direct Training

Train Embedded Providers in “Conversation Starters”

Integrate in pre-command course

Train Embedded Providers in “Conversation Starters”
Sleep Leadership Training

- Set conditions
- Lead by example
- Educate
- Encourage
- Prioritize & plan
PTSD

Victim Model of PTSD

- Unexpected
- Discrete
- Unwanted

Traumatic Event

Reaction

- Freezing
- Intense fear
- Shutting down

Symptoms

- Maladaptive
- Spread across different dimensions

Impairment

- Social
- Work
- Family

Source: Castro & Adler (2011) “Re-Conceptualizing PTSD” in Deployment Psychology
Occupational Health Model of PTSD

Source: Adapted from Castro & Adler (2011) “Re-Conceptualizing PTSD” in Deployment Psychology
# Resilience Training for Post-Deployment

<table>
<thead>
<tr>
<th>Combat Skill</th>
<th>Benefit on Deployment</th>
<th>Challenge at Home</th>
<th>Adapt the Skill</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cohesion</td>
<td>Strong connections</td>
<td>Not connecting, feel left out</td>
<td>Take time, build slowly, talk about it</td>
</tr>
<tr>
<td>Sharing Experiences</td>
<td>Support</td>
<td>Loved ones feel lack of trust</td>
<td>Share part of your story</td>
</tr>
<tr>
<td>Discipline</td>
<td>Tasks done right</td>
<td>Conflict with others</td>
<td>Negotiate, appreciate their success</td>
</tr>
<tr>
<td>Emotional Control</td>
<td>Focus on mission</td>
<td>Numb, detached, angry</td>
<td>Right emotion, right time; take time</td>
</tr>
<tr>
<td>Being Responsible</td>
<td>Leave no Soldier behind, learn from mistakes</td>
<td>2nd Guessing/Guilt</td>
<td>Limit of responsibility, other factors may have contributed</td>
</tr>
<tr>
<td>Accountability</td>
<td>Know where gear is</td>
<td>Conflict, short temper</td>
<td>Figure out what really matters</td>
</tr>
<tr>
<td>Tactical Awareness</td>
<td>Alert to danger</td>
<td>Revved up, sleep problems</td>
<td>Take your time</td>
</tr>
<tr>
<td>Targeted Aggression</td>
<td>Handle danger, React</td>
<td>Conflict, avoiding others</td>
<td>Keep it in check, breathing exercise</td>
</tr>
</tbody>
</table>

Source: Deployment Cycle Training developed by WRAIR (adapted originally from Battlemind; Adler et al., 2009)
Implications for PTSD in the Military

- Policy
  - Timing of Assessment
  - PTSD diagnostic criteria
  - Other key outcomes

- Training
  - Build on cultural strengths (buddy care, group, leader)
  - Examine degree to which these skills are trainable
  - Assess efficacy of training in military context

- Treatment
  - Embedded behavioral health care teams
  - Address potential barriers to treatment seeking
Sleep Leadership
Reported Hours of Sleep Among Soldiers and Civilians

<table>
<thead>
<tr>
<th>Hours of Sleep Per Night</th>
<th>Soldiers</th>
<th>Civilians</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤5</td>
<td>61%</td>
<td>41%</td>
</tr>
<tr>
<td>6</td>
<td>25%</td>
<td>31%</td>
</tr>
<tr>
<td>7</td>
<td>10%</td>
<td>21%</td>
</tr>
<tr>
<td>≥8</td>
<td>4%</td>
<td>8%</td>
</tr>
</tbody>
</table>

% of Population
# Sleep Leadership

<table>
<thead>
<tr>
<th>Action</th>
<th>Immediate Leaders Often/Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consider sleep as an important planning factor</td>
<td>34.7%</td>
</tr>
<tr>
<td>Encourage Service Members to get extra sleep before missions that require long hours</td>
<td>34.6%</td>
</tr>
<tr>
<td>Encourage Service Members to try to go to sleep on time</td>
<td>29.8%</td>
</tr>
<tr>
<td>Encourages Service Members to get adequate sleep</td>
<td>25.6%</td>
</tr>
<tr>
<td>Work to ensure Service Members have a good sleep environment (quiet, dark, not too hot or cold)</td>
<td>23.6%</td>
</tr>
<tr>
<td>Support the appropriate use of prescription sleep medication</td>
<td>16.5%</td>
</tr>
<tr>
<td>Discourage the use of caffeine or nicotine within several hours before trying to go to sleep</td>
<td>14.1%</td>
</tr>
<tr>
<td>Encourage Soldiers to reduce sleep distractions by using earplugs, eye-masks or other strategies</td>
<td>10.8%</td>
</tr>
<tr>
<td>Encourage Service Members to nap when possible*</td>
<td>8.5%</td>
</tr>
<tr>
<td>Asks Service Members about their sleeping habits</td>
<td>5.8%</td>
</tr>
</tbody>
</table>
Sleep Leadership: Peacekeeping

- 623 US Soldiers deployed to Horn of Africa (alpha = .90)

Source: Gunia, Sipos, LoPresti & Adler (2015), Mil Psych
619 US Soldiers deployed to Afghanistan (alpha = .93)

Source: Gunia, Sipos, LoPresti & Adler (2015), Mil Psych
Readiness Stage: Attitudes

“Is resiliency training having a positive impact on your unit?”

\[ \chi^2 (4, 2701) = 42.31, \ p < .001, \ d = .52 \ (OR = 2.61) \]

Source: Sowden & Adler (2016)